S. T. BLACK.

CLOTHES WASHER.

APPLICATION FILED JUNE 30, 1908.

903,661. Patented Nov. 10, 1908.

Fig. 1.

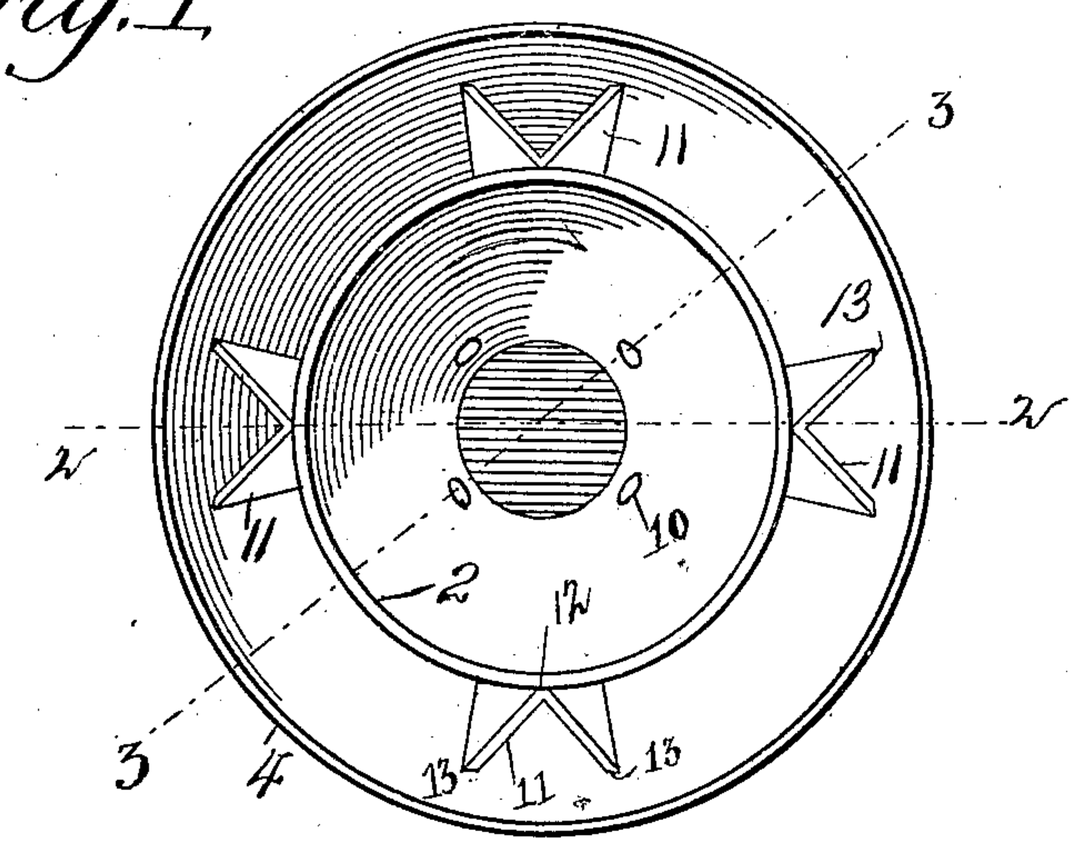


Fig. 2.

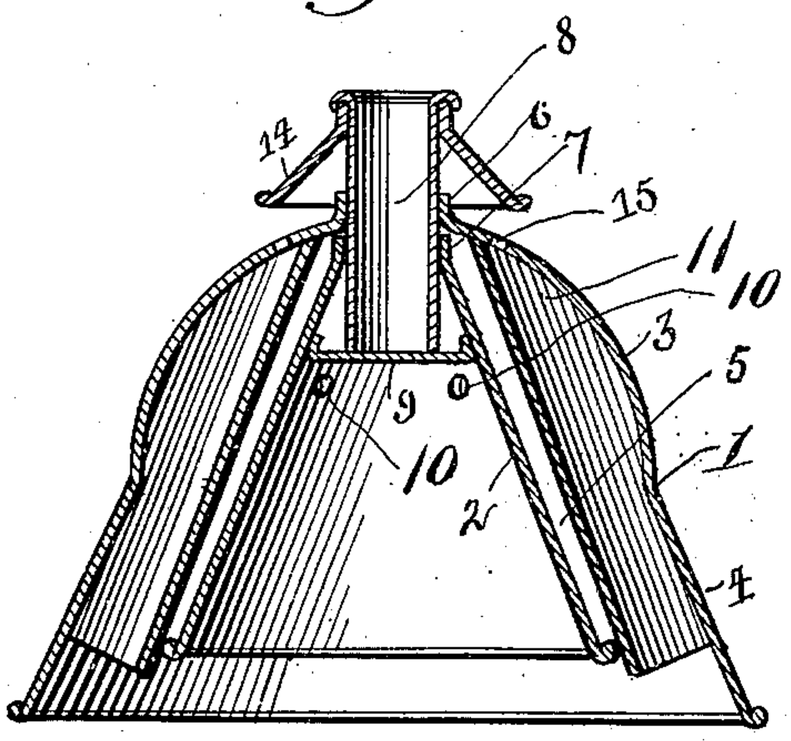
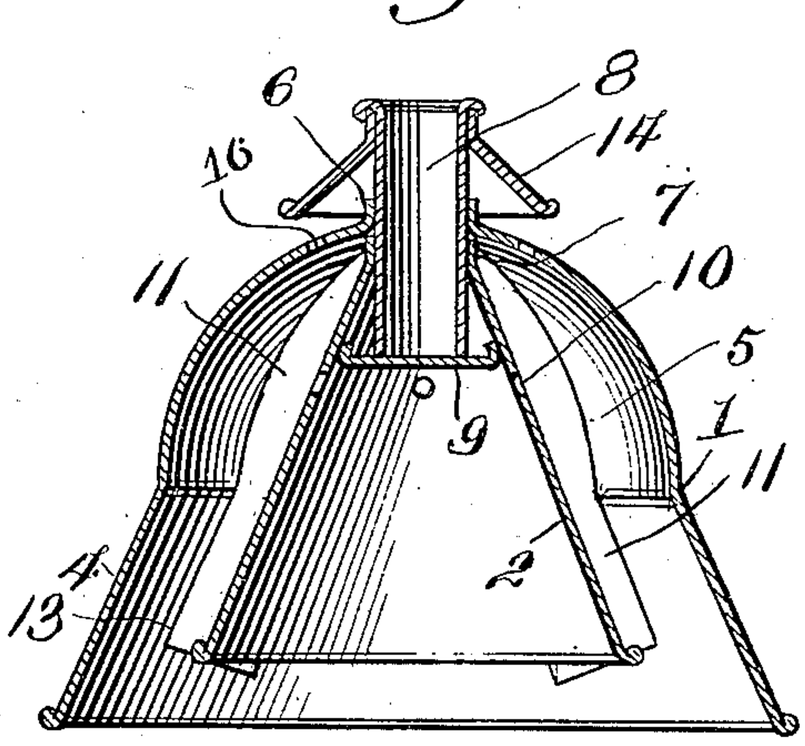


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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CLOTHES-WASHER.

No. 903,661. Specification of Letters Patent. Patented Nov. 10, 1908.

Application filed June 30, 1908. Serial No. 441,060.

To all whom it may concern:

Be it known that I, SAMUEL T. BLACK, a citizen of the United States, residing at Greenfield, in the county of Highland and State of Ohio, have invented new and useful Improvements in Clothes-Washers, of which the following is a specification.

The invention relates to an improvement in clothes washers, and is particularly directed to a construction whereby a series of distinct and separate air currents may be directed into the washing fluid so as to force the latter in a number of different directions through the clothing being washed.

The main object of the present invention is the provision of a clothes washer made up of a plurality of conical shells, arranged in spaced relation, the inner shell being closed against the space between the shells except through a series of minute openings, the construction including a series of tubes arranged in spaced relation between the shells.

The invention will be described in the following specification, reference being had particularly to the accompanying drawings, in which:

Figure 1 is a bottom plan of a clothes washer constructed in accordance with my invention. Fig. 2 is a vertical section on the line 2—2 of Fig. 1. Fig. 3 is a vertical section on the line 3—3 of Fig. 1.

Referring particularly to the drawings, my improved clothes washer comprises an outer shell 1 and an inner shell 2. The outer shell is of semispherical formation in its upper portion, as at 3, and below said upper portion of conical or flaring formation, as at 4. The inner shell 2 is of true conical formation throughout its length, being of materially less sectional dimension than the outer shell and adapted to be arranged wholly within said outer shell, whereby a space 5 is formed between the walls of the respective shells, as clearly shown in Fig. 3. The inner shell is of less length than the outer shell, and the upper end of the inner shell bears against the inner surface of the upper end of the outer shell, both of said shells at the upper end being formed with openings 6 and 7 respectively, which when the shells are in position are disposed in vertical alinement to snugly receive a ferrule or tube 8 in which the operating handle is adapted to be secured. The tube 8 depends within the inner shell, and at its lower end is closed by a partition plate 9, which is of a size and shape to bear snugly against the inner surface of the wall of the shell 2, thereby closing said shell adjacent the upper end. The wall of the inner shell adjacent and below the partition plate 9 is formed with a series of minute openings 10, which thereby establish communication between the interior of the inner shell and the space 5 between the shells.

Secured in the space 5 between the shells are a series of tubes 11, preferably formed by bending a sheet of metal into approximately right angular form, the angle of which is secured at its lower end to the lower edge of the inner shell, the free edges of the material being secured throughout their lengths, to the inner surface of the outer shell. It is to be particularly noted that the relatively inner edges of the tubes are secured to the inner shell only at the lower edge of the latter, said inner edges of the tube being, above said point of attachment, free of connection to and spaced from the wall of the inner shell. By this construction the annular space between the shells is not entirely interrupted by the tube. Secured upon the end of the tube 8, projecting beyond the outer shell, is a conical hood 14, the lower free edge of which terminates some distance above the upper surface of the outer shell. The relatively upper portion of the outer shell is formed with an opening 15, whereby communication is established between the atmosphere and the tubes, said openings 15 being preferably disposed within the plane of the free edge of the hood 14. At points intermediate the tubes the outer shell is also formed with a series of openings 16 to establish communication between the space 5 between the shells and the atmosphere, said openings 16 being also arranged within the plane of the lower end of the hood 14.

In the operation of the washer the elevation thereof will cause a series of distinct and separate air currents to be directed into the water and thereby force the latter positively through the clothes being washed, said separate air currents finding their way through the openings 15 and through the tubes, through the openings 16 and through the space 5, and through the openings 10 and out through the inner shell. A circulation of the soapy water is thus secured and the consequent easy and effective removal of dirt and other impurities from the clothes ef-

fected. The respective openings 10, 15, and 16 are to be of a size to permit the pounder to be lifted without incurring appreciable resistance to the suction, but are not to be large enough to permit excessive escape of air through said openings, thereby permitting the downward movement of the washer to store the air initially for the purpose noted.

The various parts of the washer are preferably constructed of metal and are to be made in dimensions appropriate for the particular work in hand.

Having thus described the invention what is claimed as new, is:—

1. A clothes washer including an inner shell and an outer shell arranged in spaced relation, a handle tube passing through both shells and depending within the inner shell, a partition plate secured to the lower end of said tube and entirely closing the inner shell, tubes secured in the space between the shells, the outer shell being formed with inlet openings in communication with the tubes, said outer shell being also formed with openings communicating with the space between the shells, and a hood carried by the handle tube and overlying said openings.

2. A clothes washer including an inner shell and an outer shell arranged in spaced relation, a handle tube passing through both shells and depending within the inner shell, a partition plate secured to the lower end of said tube and entirely closing the inner shell, tubes secured in the space between the shells, the outer shell being formed with inlet openings in communication with the tubes, said outer shell being also formed with openings communicating with the space between the shells, and a hood carried by the handle tube and overlying said openings, the inner shell being formed with openings below the partition plate to establish communication with the space between the shells.

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL T. BLACK.

Witnesses:

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